

IN THE CLAIMS:

Please consider the following:

1. (Currently amended) A condenser microphone employing a wide band stop filter for wideband signals of low frequency and radio frequency, the condenser microphone having improved resistance to electrostatic discharge applied from outside and preventing radio frequency interference to decrease noise, the condenser microphone comprising:

an acoustic module for converting sound pressure into an electric signal;

an amplification means for amplifying the electric signal input from the acoustic module;

and

an EM-noise-filtering/ESD-blocking section for blocking a wideband signal having low frequency and radio frequency output from the amplification means, blocking introduced electromagnetic waves, radio wave noise, and electrostatic discharge, the EM-noise-filtering/ESD-blocking section comprising:

a first bypass capacitor connected in parallel between an output port of the amplification means and ground port to function as a filter;

a second bypass capacitor connected parallel to the first bypass capacitor to perform an EM-noise-filtering and ESD-blocking function; and

a first decoupling resistor connected serially between an output port of the first bypass capacitor and an output port of the second bypass capacitor to perform a decoupling function, so that the EM-noise-filtering/ESD-blocking section has a shape of a character 'Π',

wherein the first capacitor has a capacitance of 10pF, the second capacitor has a capacitance selected from the group consisting of 1nF, 1.5nF, 2.2nF, 3.3nF, 4.7nF, 6.8nF, 10nF, 15nF, 22nF, 33nF, 47nF, 68nF and 100nF, and the first resistor has a resistance selected from the group consisting of 220Ω, 330Ω, 430Ω, 620Ω, 680Ω, 820Ω and 1KΩ, and

wherein the first bypass capacitor bypasses a low frequency band and the second bypass capacitor bypasses a high frequency band.

2. (Withdrawn) A condenser microphone as claimed in claim 1, wherein the capacitor and the resistor have a capacitance between 1pF and 100μF and a resistance between 10Ω and 1GΩ, respectively, each of which can be selectively adjusted according to frequency band.

3. (Withdrawn) A condenser microphone as claimed in claim 1, wherein the EM-noise-filtering/ESD-blocking section comprises:

a resistor connected serially between output port of the amplification means and signal output port; and

a capacitor connected between one end of the resistor and ground.

4. (Withdrawn) A condenser microphone as claimed in claim 3, wherein:

the capacitor has a capacitance selected from the group consisting of 1nF, 1.5nF, 2.2nF, 3.3nF, 4.7nF, 6.8nF, 10nF, 15nF, 22nF, 33nF, 47nF, 68nF and 100nF; and

the resistor has a resistance selected from the group consisting of 100Ω, 220Ω, 330Ω, 430Ω, 620Ω, 680Ω, 820Ω and 1KΩ.

5. (Cancelled)

6. (Cancelled)

7. (Withdrawn) A condenser microphone as claimed in claim 1, wherein the EM-noise-filtering/ESD-blocking section comprises:

a first capacitor connected in parallel between an output port of the amplification means and a ground port to function as a filter;

a second capacitor connected parallel to the first capacitor to perform an EM-noise-filtering function; and

a first resistor connected serially to between a ground port of the first capacitor and a ground port of the second capacitor to perform a decoupling function, so that the EM-noise-filtering/ESD-blocking section has a shape of a character 'inverted II'.

8. (Withdrawn) A condenser microphone as claimed in claim 7, wherein:
the first capacitor has a capacitance of 10pF or 33pF;
the second capacitor has a capacitance selected from the group consisting of 1nF, 1.5nF, 2.2nF, 3.3nF, 4.7nF, 6.8nF, 10nF, 15nF, 22nF, 33nF, 47nF, 68nF and 100nF; and
the first resistor has a resistance selected from the group consisting of 100Ω, 220Ω, 330Ω, 430Ω, 620Ω, 680Ω, 820Ω and 1KΩ.

9. (Cancelled)

10. (Cancelled)

11. (Withdrawn) A condenser microphone as claimed in claim 1, wherein the EM-noise-filtering/ESD-blocking section comprises:

a first and a second capacitor connected in parallel between output port of the amplification means and ground port; and

a first and a second resistor connected respectively between adjacent ends of the two capacitors, so that the EM-noise-filtering/ESD-blocking section has a shape of a character '#', wherein,

the first capacitor performs a filtering function, the second capacitor facing the first capacitor performs an EM-noise-filtering and electrostatic-discharge-blocking function, and the resistors performs a decoupling function and an electrostatic-discharge-blocking function.

12. (Withdrawn) A condenser microphone as claimed in claim 11, wherein:
the first capacitor has a capacitance of 10pF or 33pF;
the second capacitor has a capacitance selected from the group consisting of 1nF, 1.5nF, 2.2nF, 3.3nF, 4.7nF, 6.8nF, 10nF, 15nF, 22nF, 33nF, 47nF, 68nF and 100nF; and
each of the first and second resistors has a resistance selected from the group consisting of 100Ω, 220Ω, 330Ω, 430Ω, 620Ω, 680Ω, 820Ω and 1KΩ.

13. (Withdrawn) A condenser microphone as claimed in claim 11, further comprising a noise-blocking resistor between the acoustic module and input port of the amplification means so as to block electromagnetic noise from being inputted.

14. (Withdrawn) A condenser microphone as claimed in claim 13, wherein the noise-blocking resistor has a resistance selected from the group consisting of 100Ω , $1K\Omega$, $10K\Omega$, $100K\Omega$, and $1M\Omega$.

15. (Withdrawn) A condenser microphone as claimed in claim 1, wherein the EM-noise-filtering section comprises a first capacitor, a second capacitor, and a third capacitor connected in parallel with each other between ground port and output port of the amplification means.

16. (Withdrawn) A condenser microphone as claimed in claim 15, wherein:
the first capacitor can be selectively adjusted so as to have a capacitance between $10pF$ and $20pF$;
the second capacitor can be selectively adjusted so as to have a capacitance between $20pF$ and $1nF$; and
the third capacitor $C43$ can be selectively adjusted so as to have a capacitance between $1nF$ and $100\mu F$.

17. (Withdrawn) A condenser microphone as claimed in claim 15, wherein, in the EM-noise-filtering/ESD-blocking section, a resistor is further connected serially between a signal output end of the second capacitor and a signal output end of the third capacitor.

18. (Withdrawn) A condenser microphone as claimed in claim 17, wherein:
the first capacitor is selectively adjusted so as to have a capacitance between $10pF$ and $20pF$;
the second capacitor is selectively adjusted so as to have a capacitance between $20pF$ and

1nF;

the third capacitor has a capacitance selected from the group consisting of 1nF, 1.5nF, 2.2nF, 3.3nF, 4.7nF, 6.8nF, 10nF, 15nF, 22nF, 33nF, 47nF, 68nF and 100nF; and

the resistor has a resistance selected from the group consisting of 100Ω, 220Ω, 330Ω, 430Ω, 620Ω, 680Ω, 820Ω and 1KΩ.

19. (Withdrawn) A condenser microphone as claimed in claim 15, wherein, in the EM-noise-filtering section, a resistor is further connected serially between a ground end of the second capacitor and a ground end of the third capacitor.

20. (Withdrawn) A condenser microphone as claimed in claim 19, wherein:

the first capacitor is selectively adjusted so as to have a capacitance between 10pF and 20pF;

the second capacitor is selectively adjusted so as to have a capacitance between 20pF and 1nF;

the third capacitor has a capacitance selected from the group consisting of 1nF, 1.5nF, 2.2nF, 3.3nF, 4.7nF, 6.8nF, 10nF, 15nF, 22nF, 33nF, 47nF, 68nF and 100nF; and

the resistor has a resistance selected from the group consisting of 100Ω, 220Ω, 330Ω, 430Ω, 620Ω, 680Ω, 820Ω and 1KΩ.

21. (Withdrawn) A condenser microphone as claimed in claim 1, wherein, the capacitor is a temperature compensating capacitor or a capacitor of high dielectric constant.

22. (Withdrawn) A condenser microphone as claimed in claim 1, wherein, the amplification means is one of an amplifier used in a built-in-gain microphone and a field-effect transistor.

23. (Withdrawn) A condenser microphone as claimed in claim 7, further comprising a noise-blocking resistor between the acoustic module and input port of the amplification means so

as to block electromagnetic noise from being inputted.

24. (Withdrawn) A condenser microphone as claimed in claim 23, wherein the noise-blocking resistor has a resistance selected from the group consisting of 100Ω , $1K\Omega$, $10K\Omega$, $100K\Omega$, and $1M\Omega$.